"DOCKET" 60985760

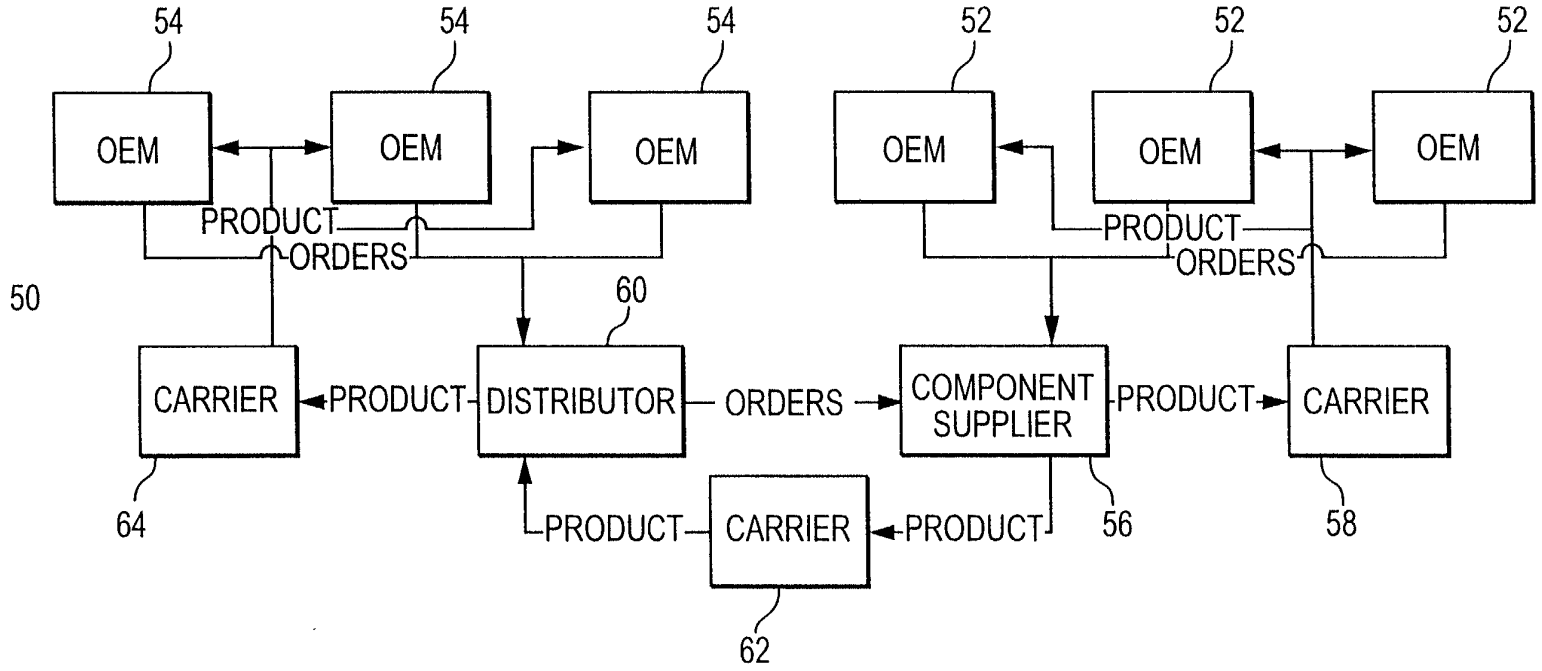



FIG. 1
PRIOR ART

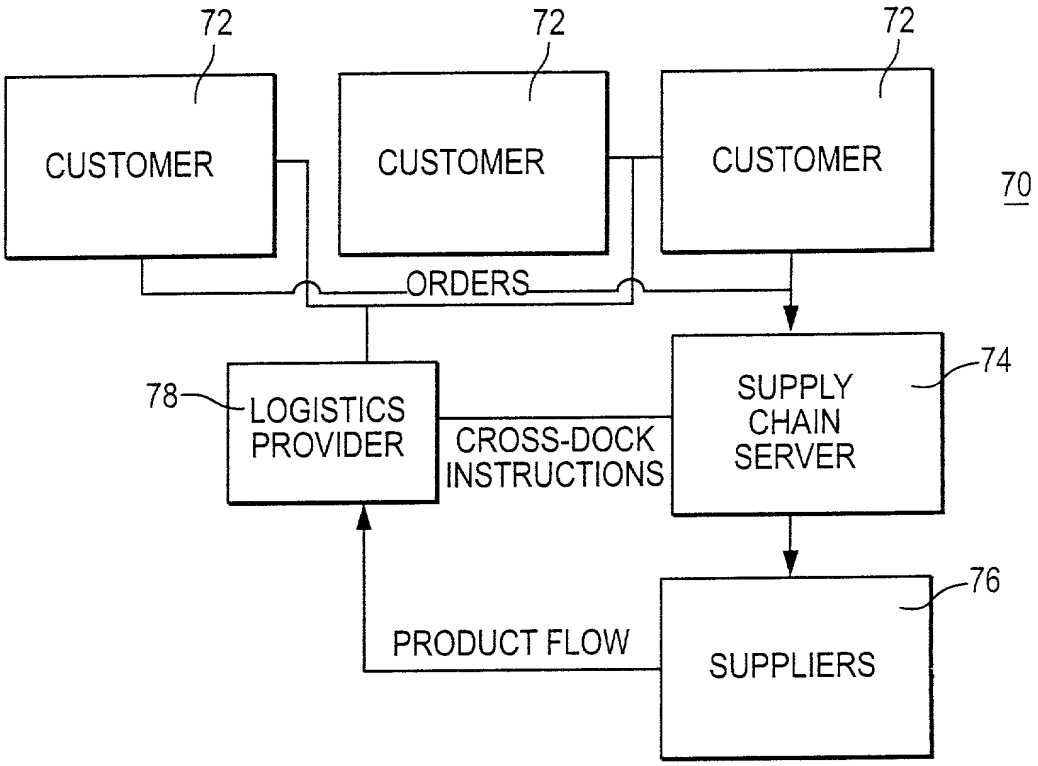

72
72
72
CUSTOMER
CUSTOMER
CUSTOMER
70
ORDERS
78
LOGISTICS PROVIDER
CROSS-DOCK INSTRUCTIONS
SUPPLY CHAIN SERVER
74
76
PRODUCT FLOW
SUPPLIERS

FIG. 2

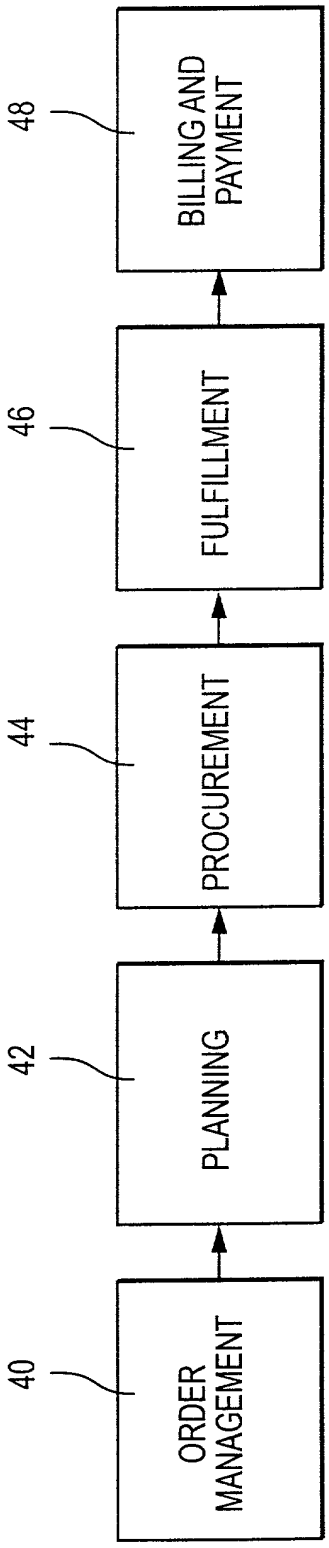

40
ORDER MANAGEMENT
42
PLANNING
44
PROCUREMENT
46
FULFILLMENT
48
BILLING AND PAYMENT

FIG. 3

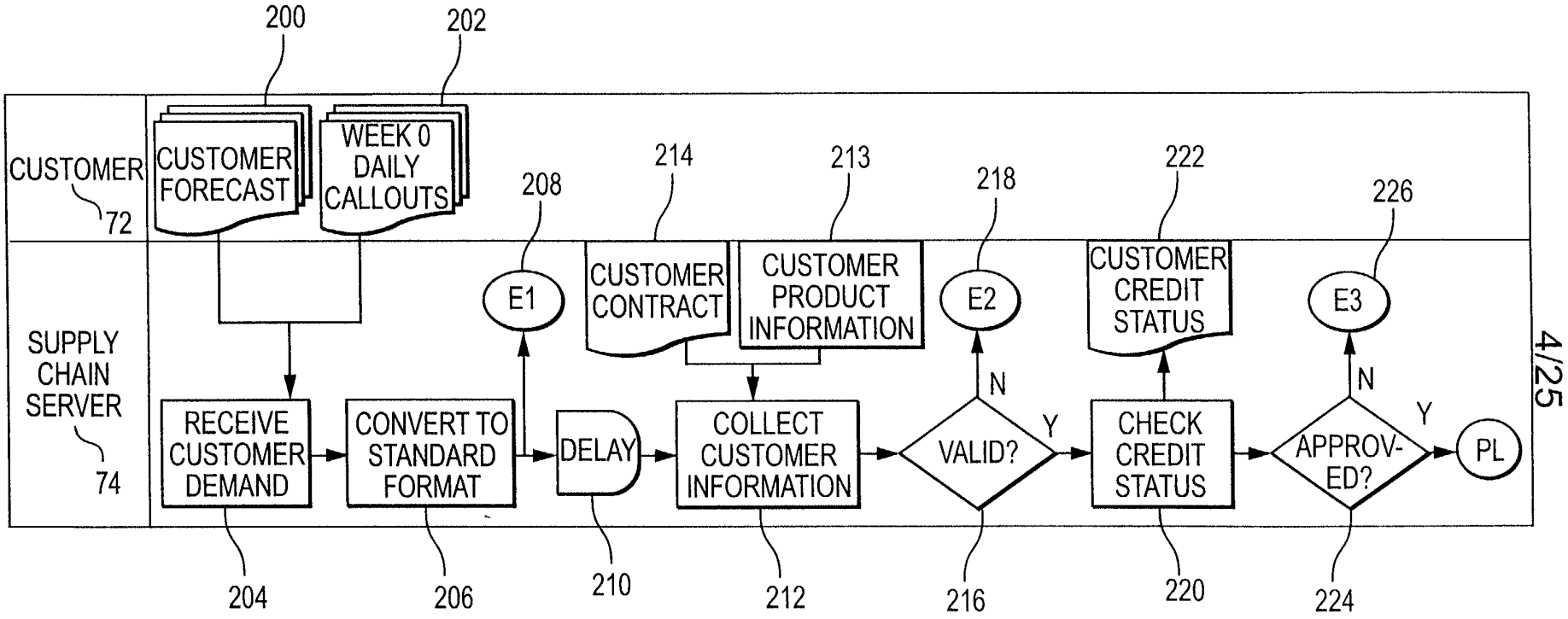
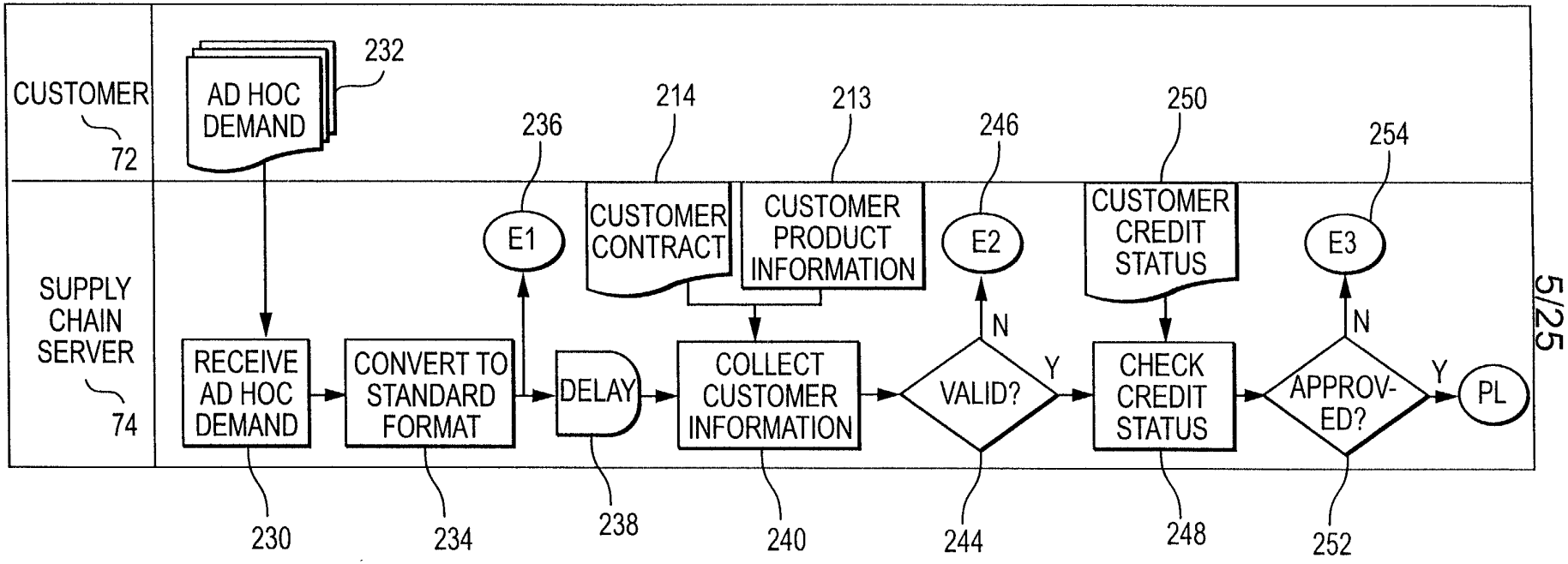

200
202
CUSTOMER
72
CUSTOMER FORECAST
WEEK 0 DAILY CALLOUTS
208
214
213
218
222
226
E1
CUSTOMER CONTRACT
CUSTOMER PRODUCT INFORMATION
E2
CUSTOMER CREDIT STATUS
E3
SUPPLY CHAIN SERVER
74
RECEIVE CUSTOMER DEMAND
CONVERT TO STANDARD FORMAT
DELAY
COLLECT CUSTOMER INFORMATION
VALID?
N
Y
CHECK CREDIT STATUS
APPROV-ED?
N
Y
PL
204
206
210
212
216
220
224
4/25

FIG. 4

TOTOOT"60585760

DEMAND CAPTURE AND VALIDATION-AD HOC DEMAND




5/25

FIG. 5

TOTOOT"60585760

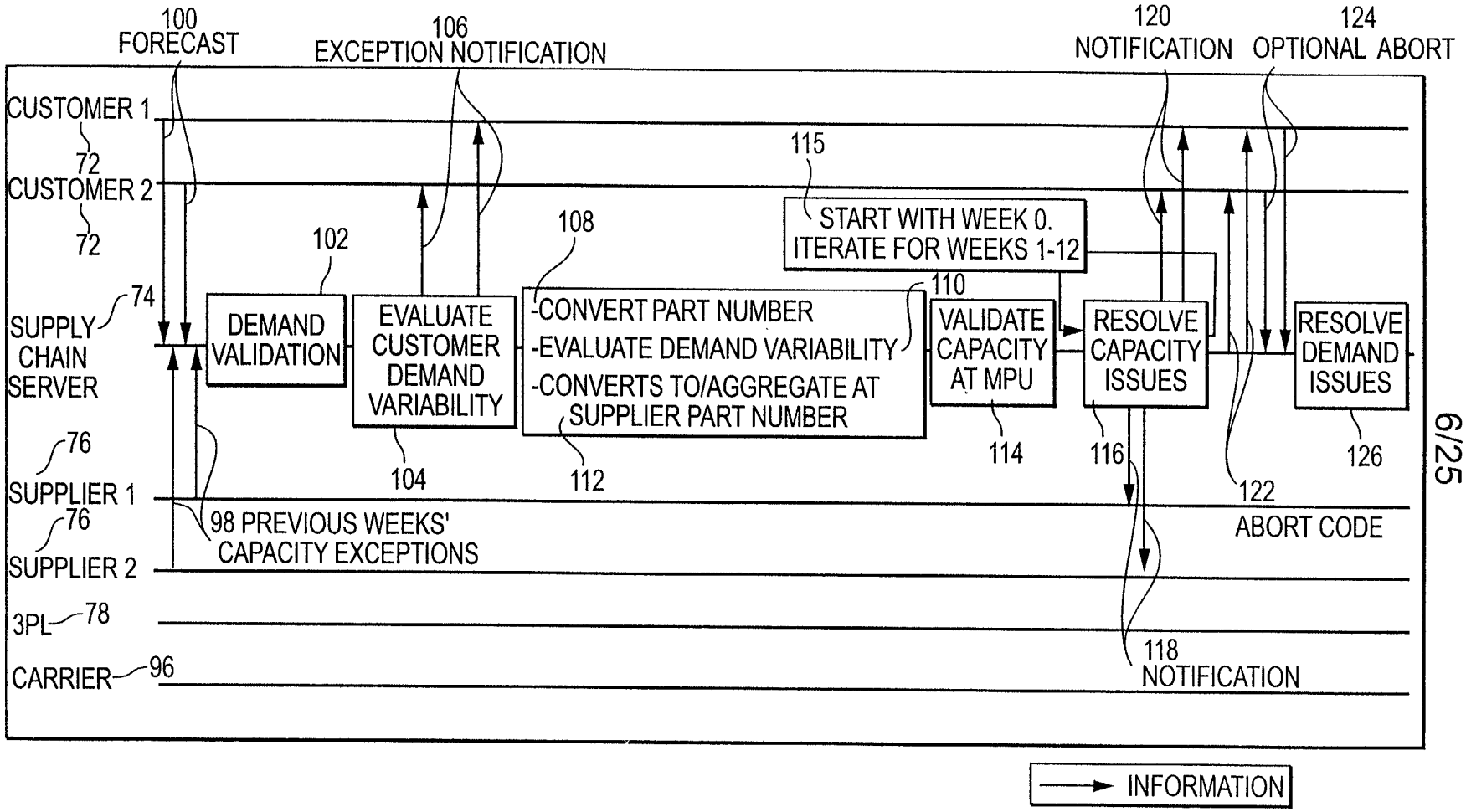



FIG. 6

NORMAL PLANNING SCENARIO

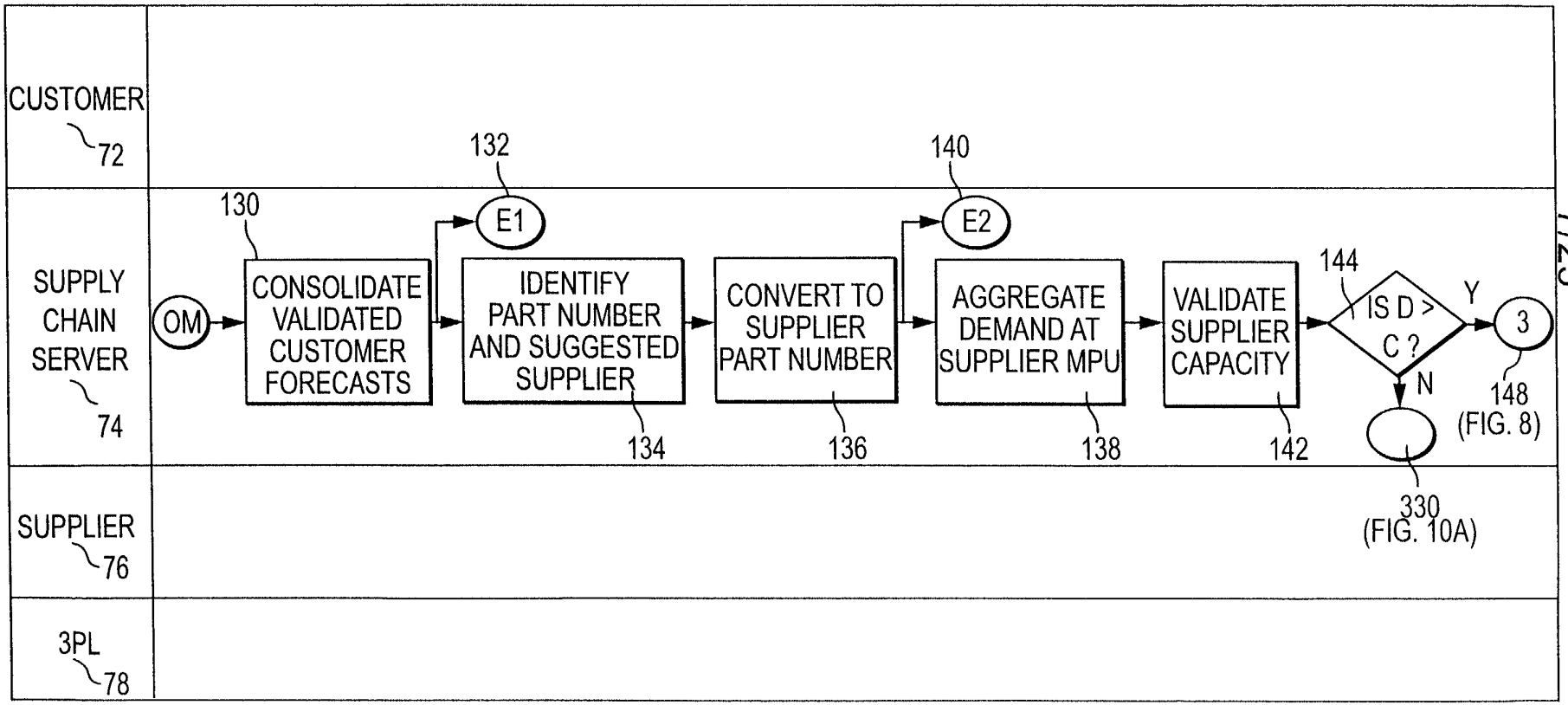



FIG. 7

CONSTRAINED SUPPLY PLANNING SCENARIO (ITERATIVE PROCESS)

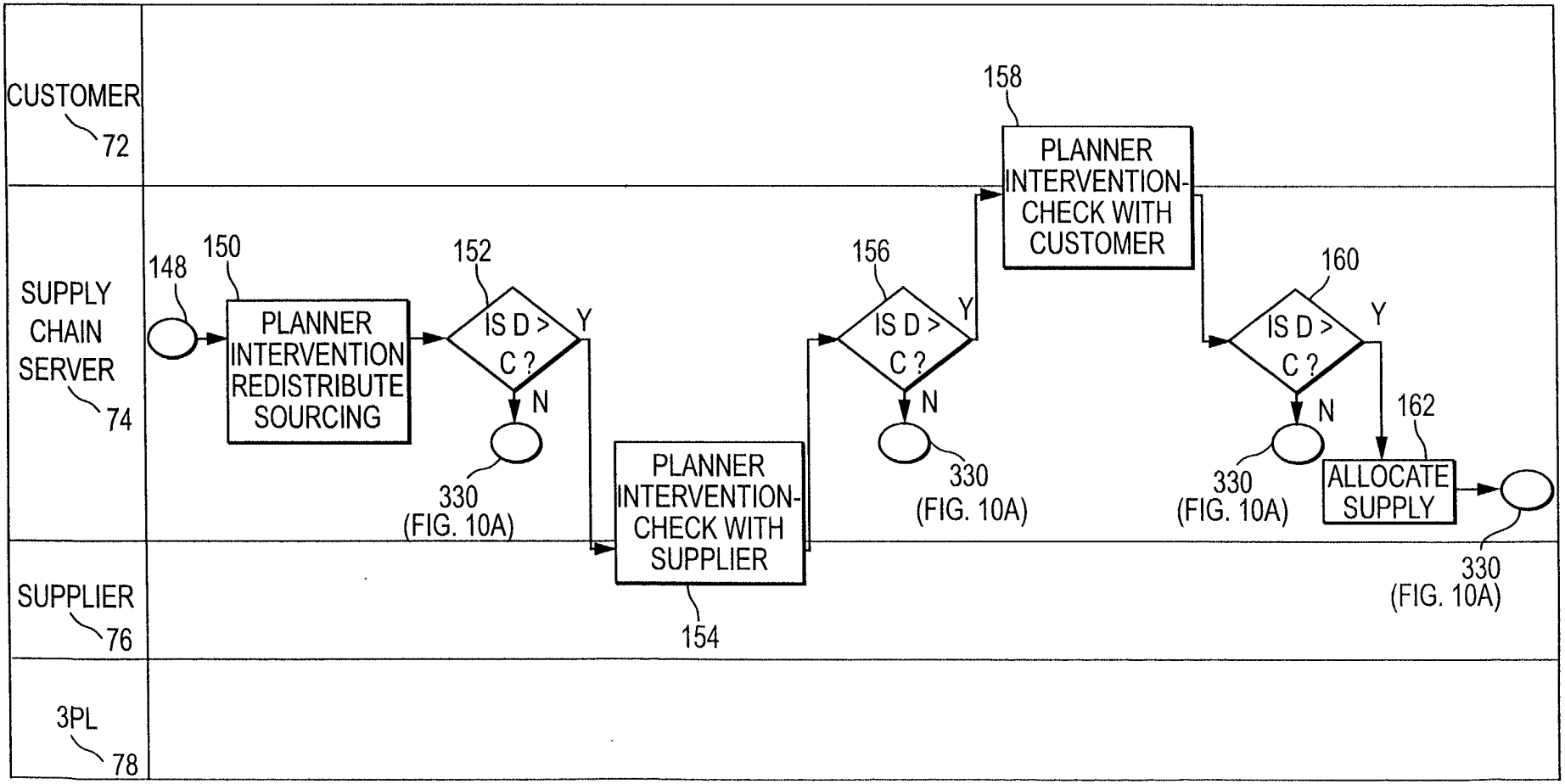



FIG. 8

AD HOC ORDER PLANNING SCENARIO

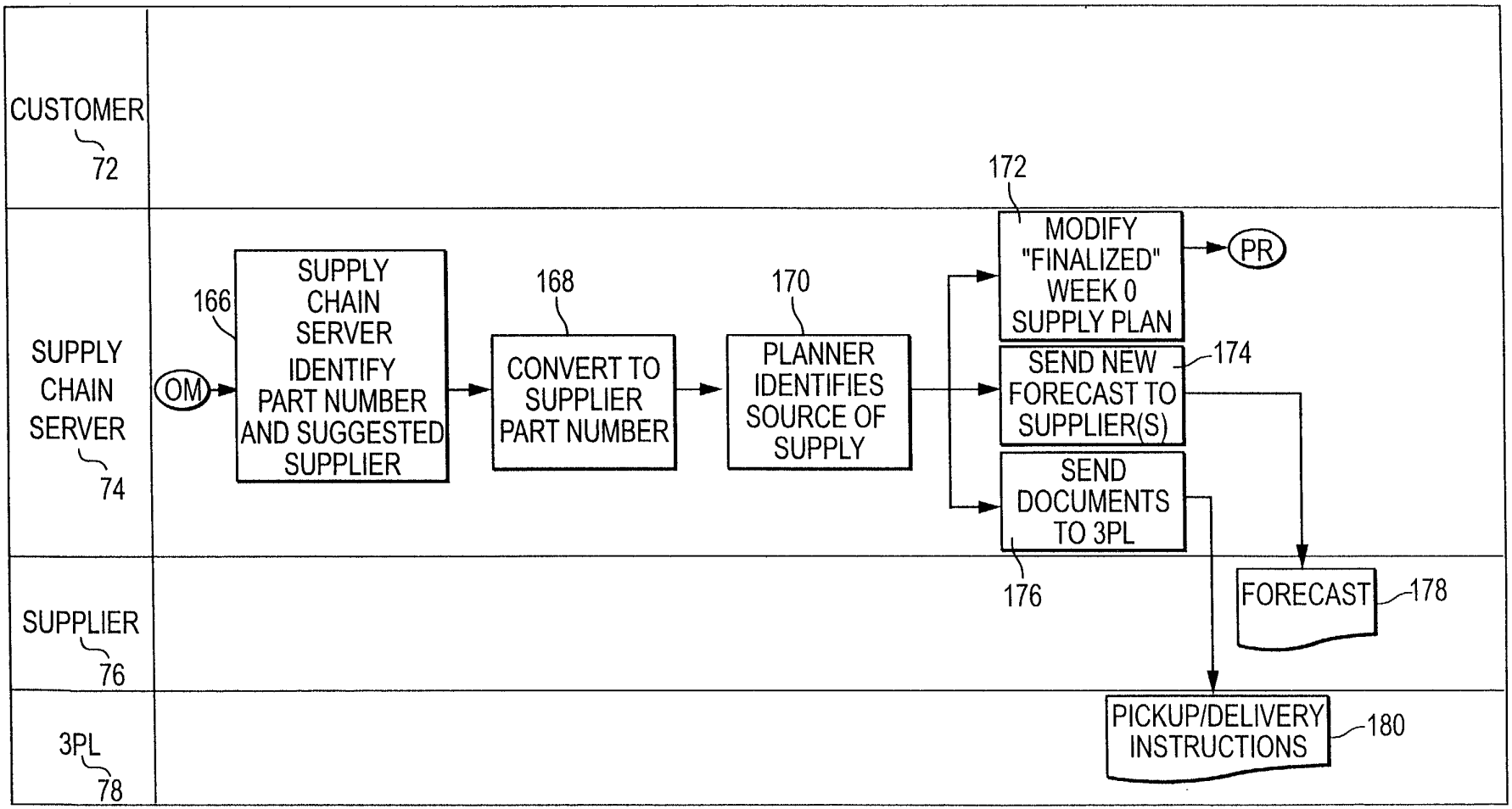



FIG. 9

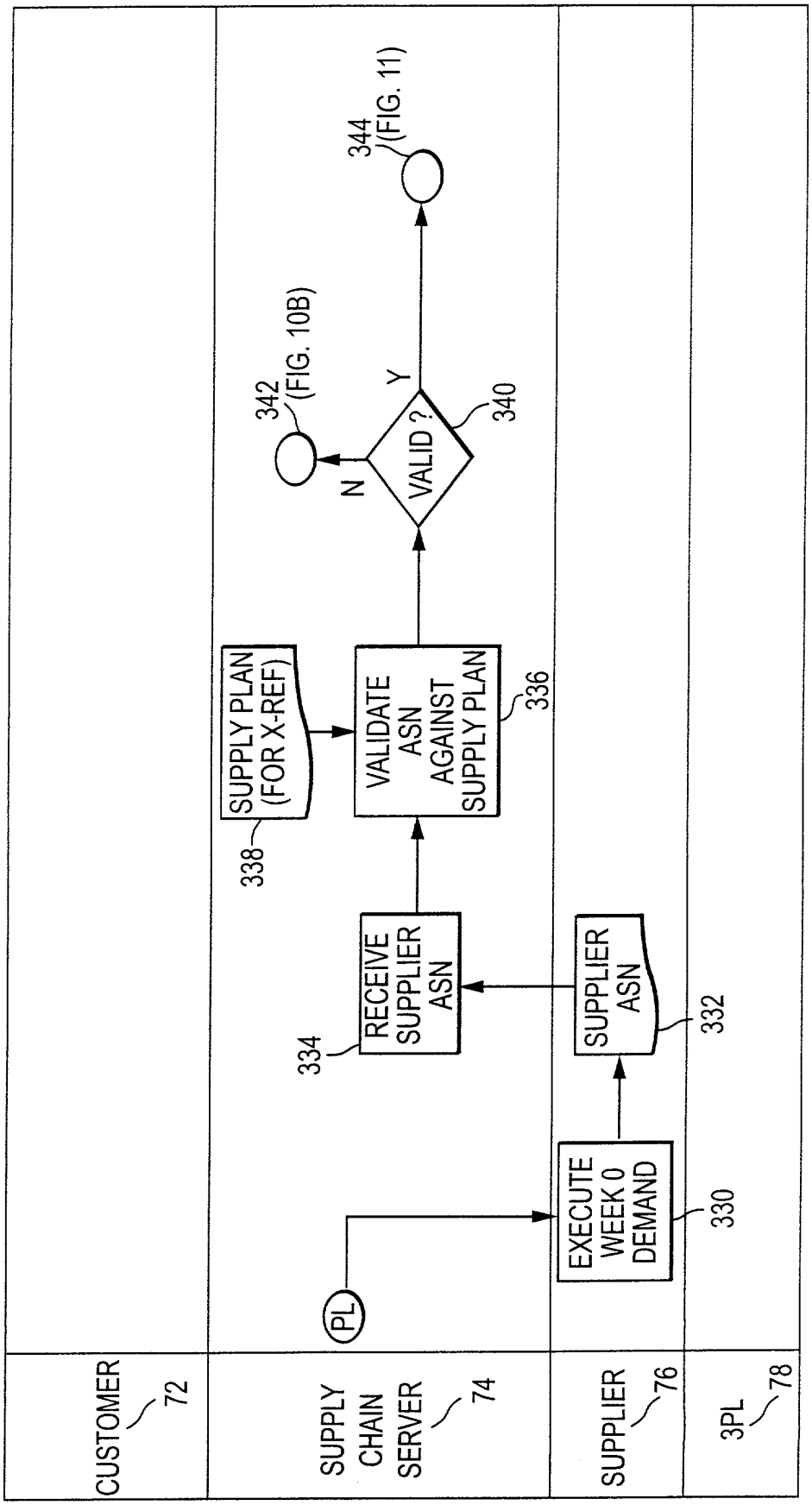
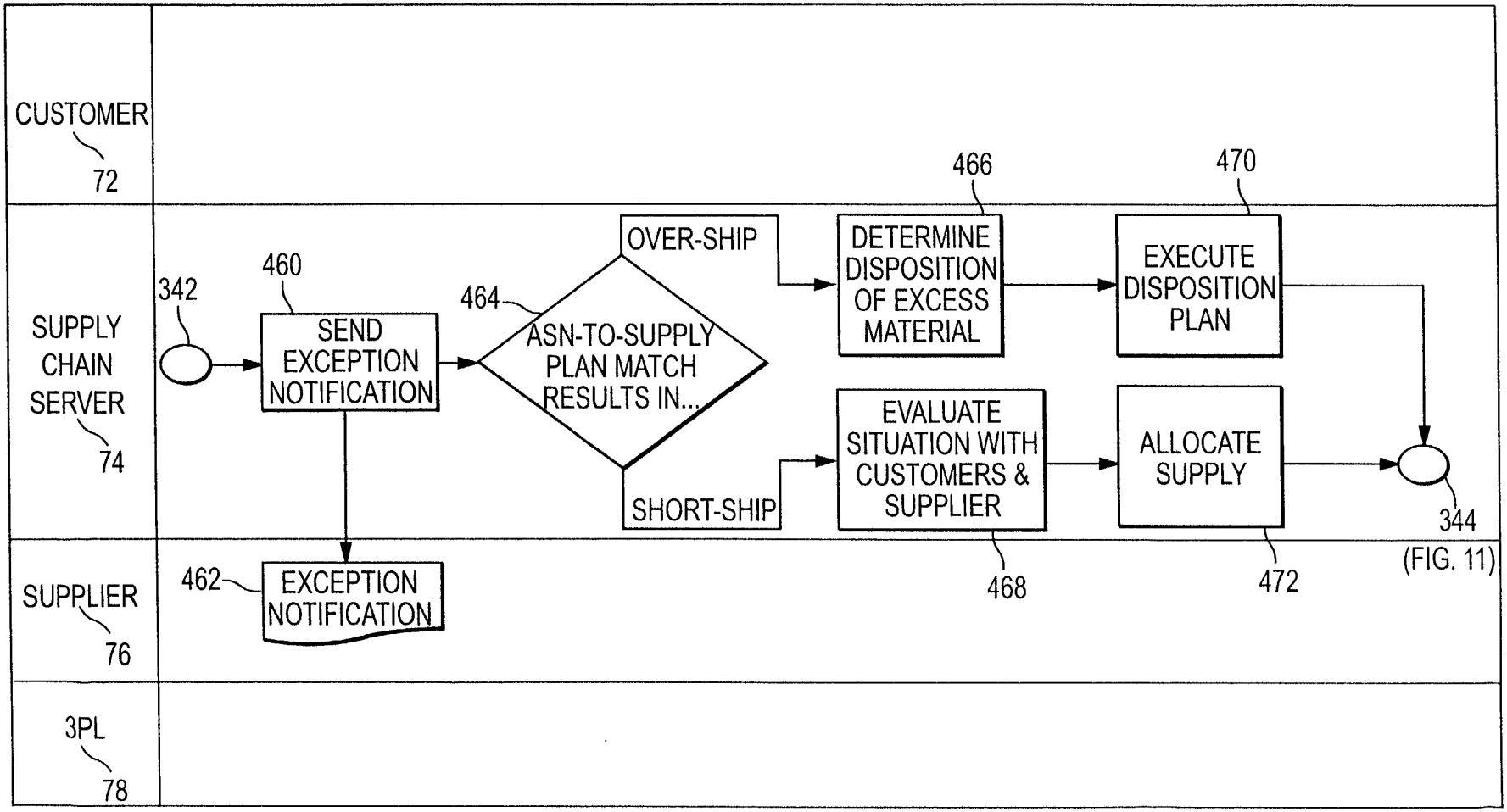

CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
PL
EXECUTE WEEK 0 DEMAND
330
SUPPLIER ASN
332
RECEIVE SUPPLIER ASN
334
SUPPLY PLAN (FOR X-REF)
338
VALIDATE ASN AGAINST SUPPLY PLAN
336
VALID ?
340
Y
N
342 (FIG. 10B)
344 (FIG. 11)

FIG. 10A




(FIG. 11)

11/25

FIG. 10B

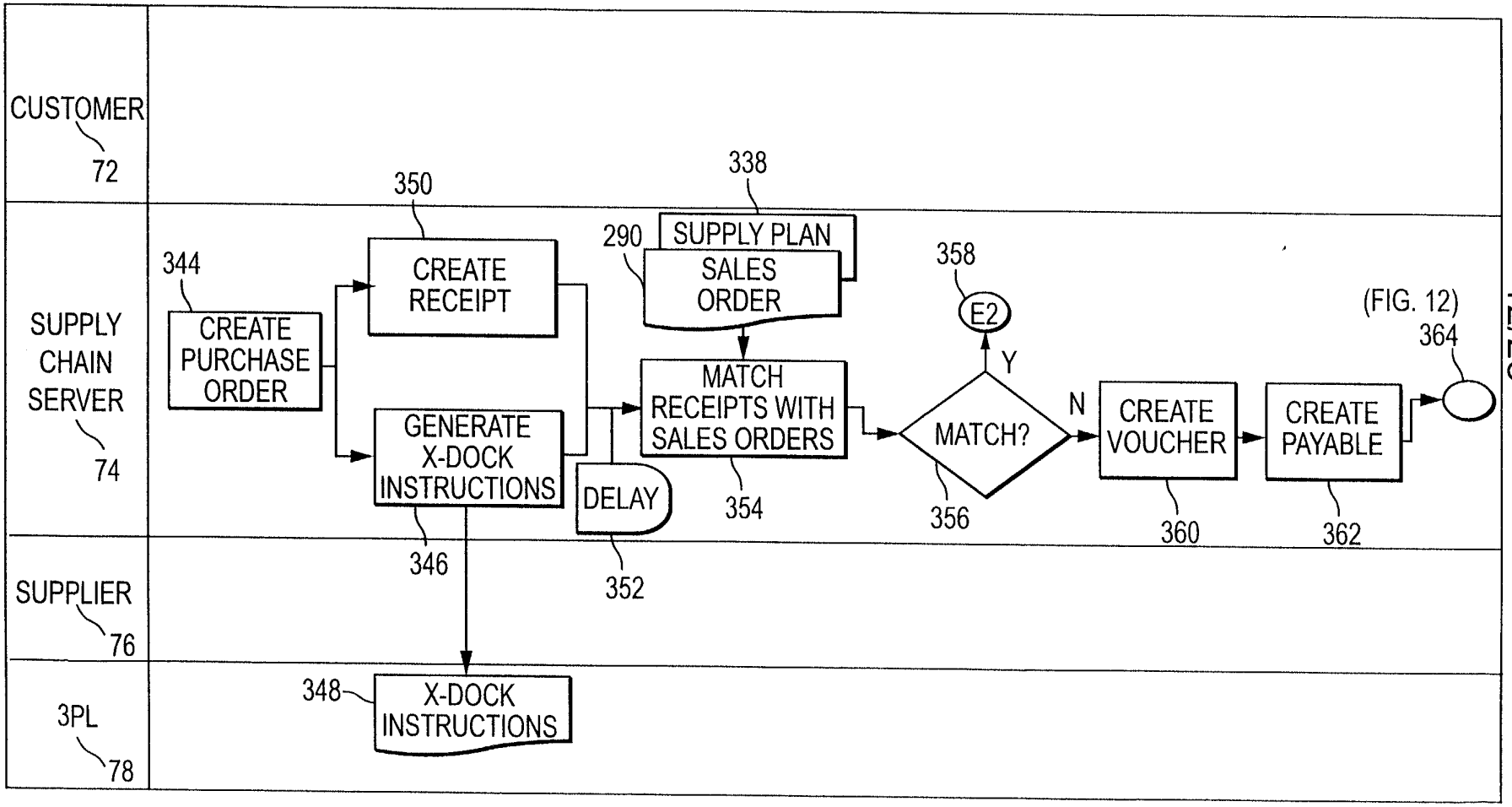
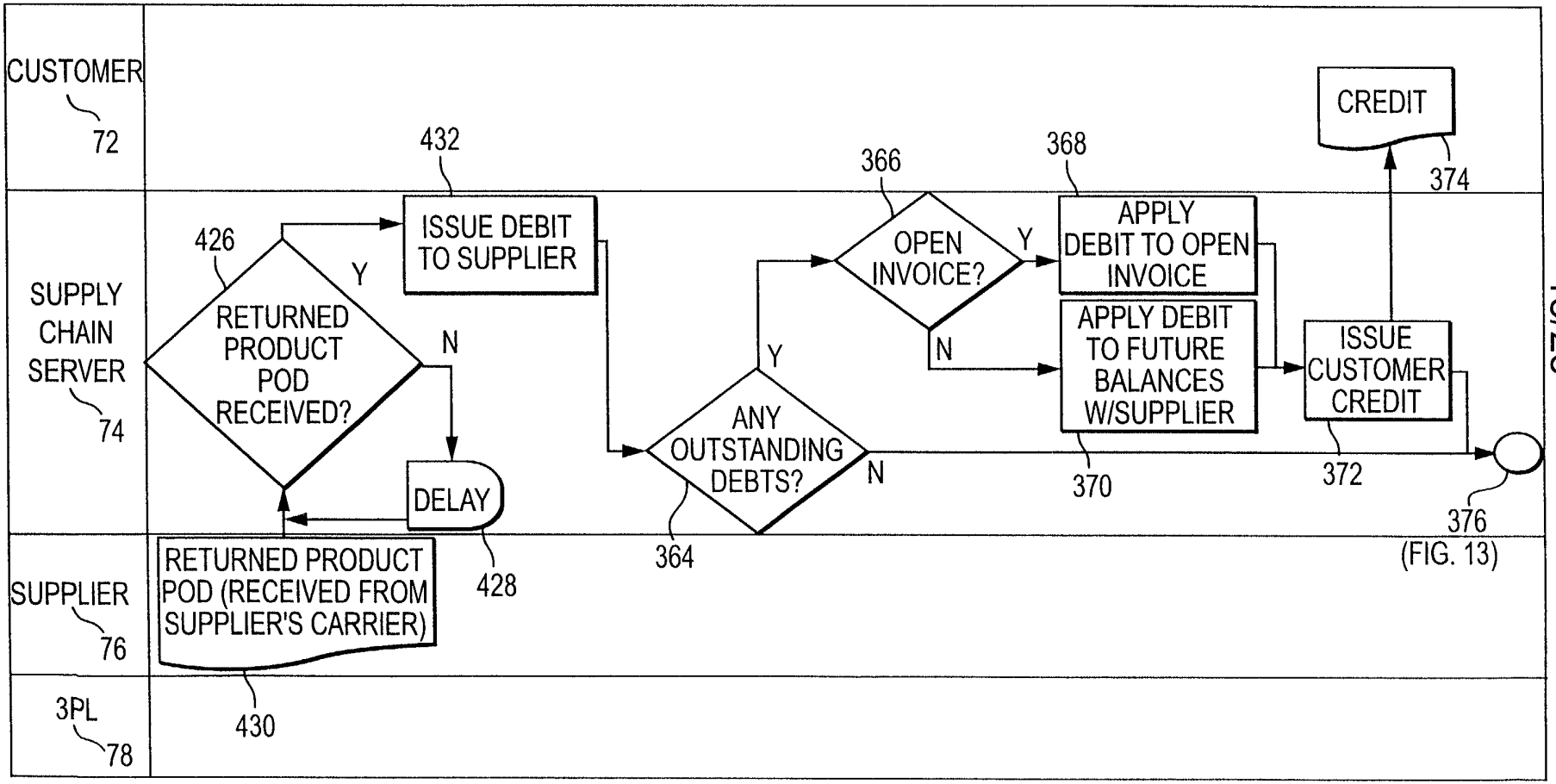

CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
344
CREATE PURCHASE ORDER
350
CREATE RECEIPT
346
GENERATE X-DOCK INSTRUCTIONS
348
X-DOCK INSTRUCTIONS
338
290
SUPPLY PLAN
SALES ORDER
DELAY
352
MATCH RECEIPTS WITH SALES ORDERS
354
358
E2
Y
MATCH?
356
N
CREATE VOUCHER
360
CREATE PAYABLE
362
364
(FIG. 12)

FIG. 11


CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
RETURNED PRODUCT POD (RECEIVED FROM SUPPLIER'S CARRIER)
430
RETURNED PRODUCT POD RECEIVED?
426
Y
N
ISSUE DEBIT TO SUPPLIER
432
DELAY
428
ANY OUTSTANDING DEBTS?
364
Y
N
OPEN INVOICE?
366
Y
N
APPLY DEBIT TO OPEN INVOICE
368
APPLY DEBIT TO FUTURE BALANCES W/SUPPLIER
370
ISSUE CUSTOMER CREDIT
372
CREDIT
374
376

(FIG. 13)

FIG. 12

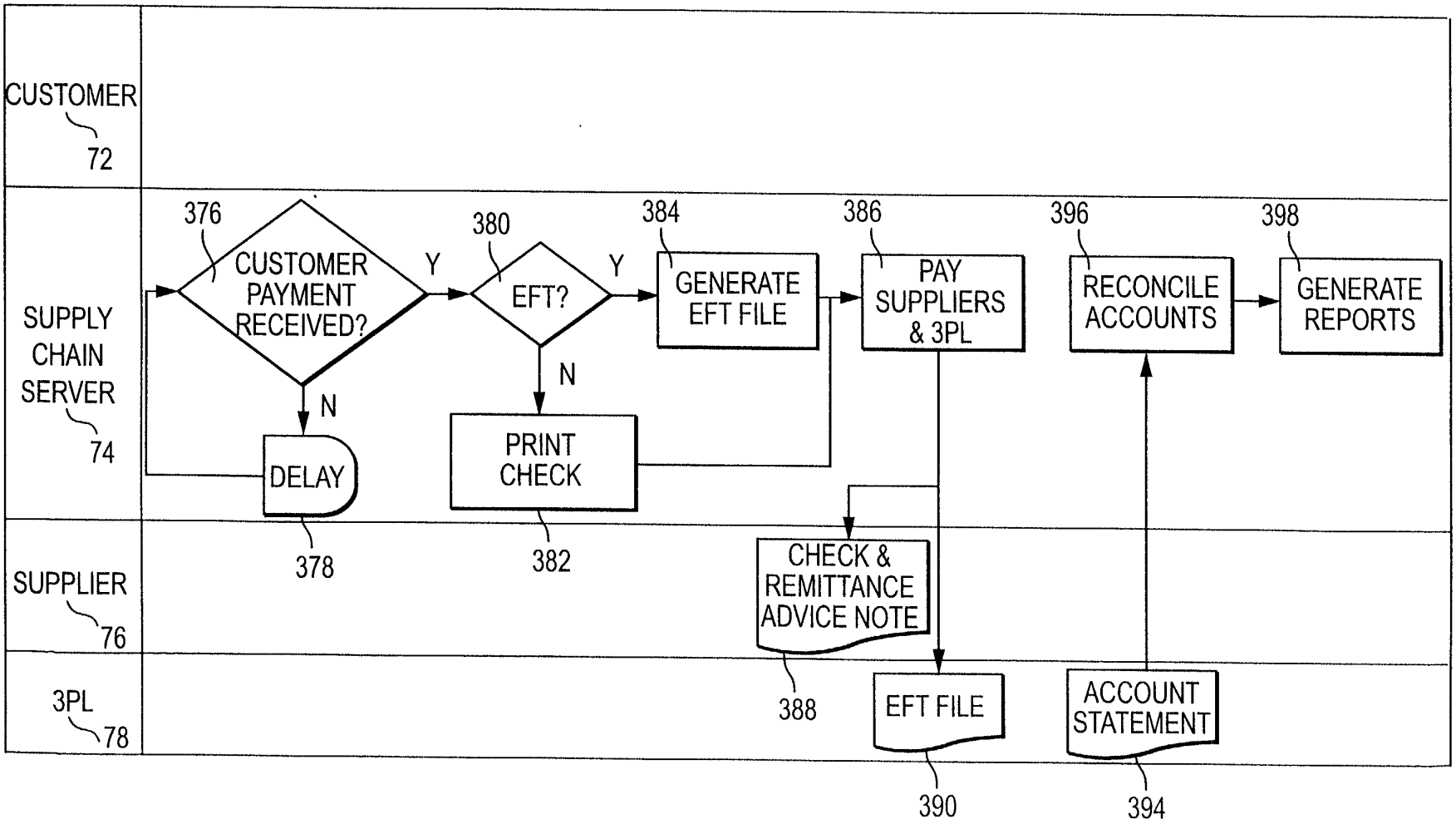

CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
376
CUSTOMER PAYMENT RECEIVED?
Y
N
380
EFT?
Y
N
384
GENERATE EFT FILE
386
PAY SUPPLIERS & 3PL
396
RECONCILE ACCOUNTS
398
GENERATE REPORTS
DELAY
378
PRINT CHECK
382
CHECK & REMITTANCE ADVICE NOTE
388
EFT FILE
390
ACCOUNT STATEMENT
394

FIG. 13

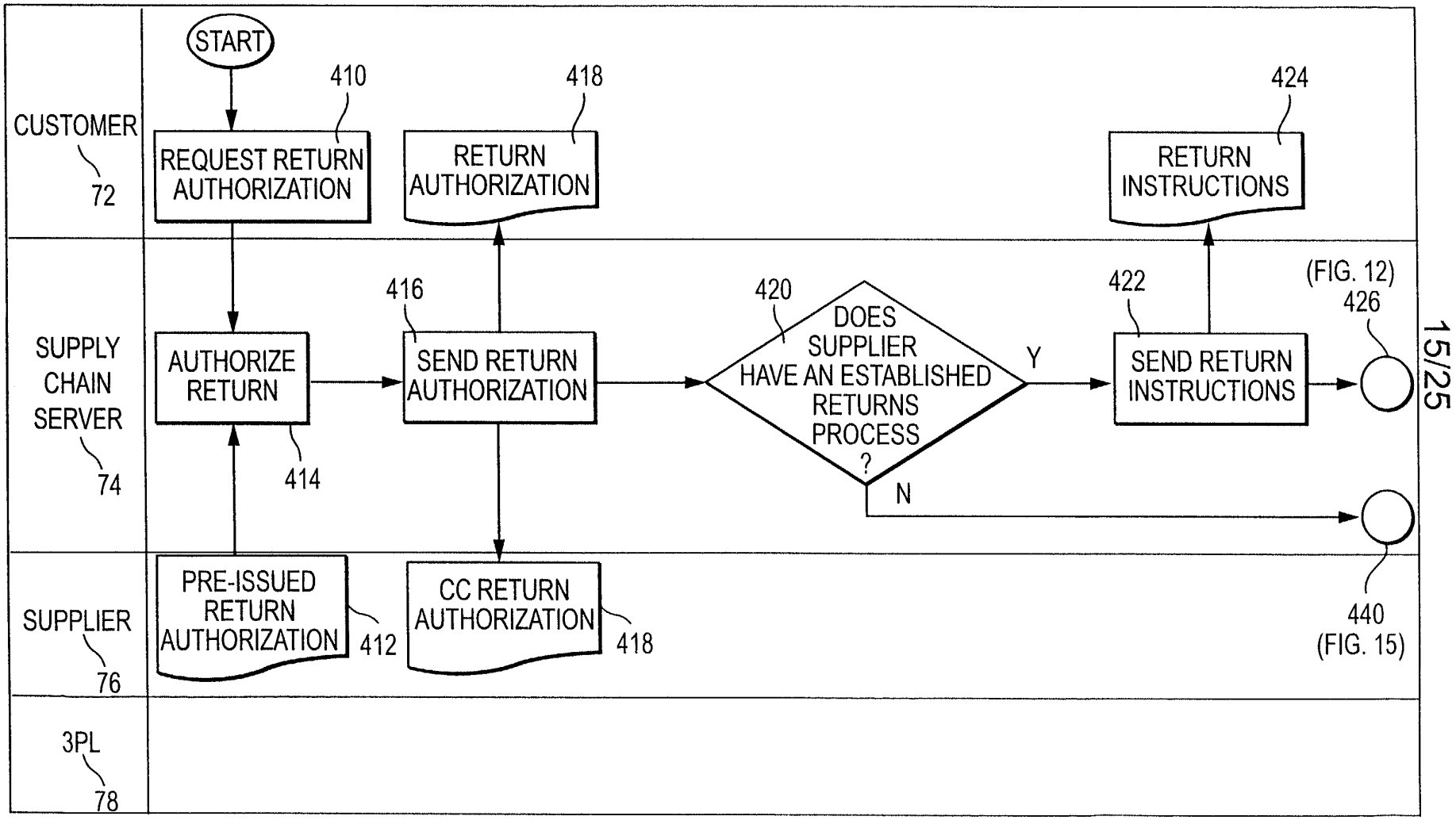

CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
START
410
REQUEST RETURN AUTHORIZATION
418
RETURN AUTHORIZATION
424
RETURN INSTRUCTIONS
AUTHORIZE RETURN
414
416
SEND RETURN AUTHORIZATION
420
DOES SUPPLIER HAVE AN ESTABLISHED RETURNS PROCESS ?
Y
N
422
SEND RETURN INSTRUCTIONS
(FIG. 12)
426
PRE-ISSUED RETURN AUTHORIZATION
412
CC RETURN AUTHORIZATION
418
440
(FIG. 15)

FIG. 14

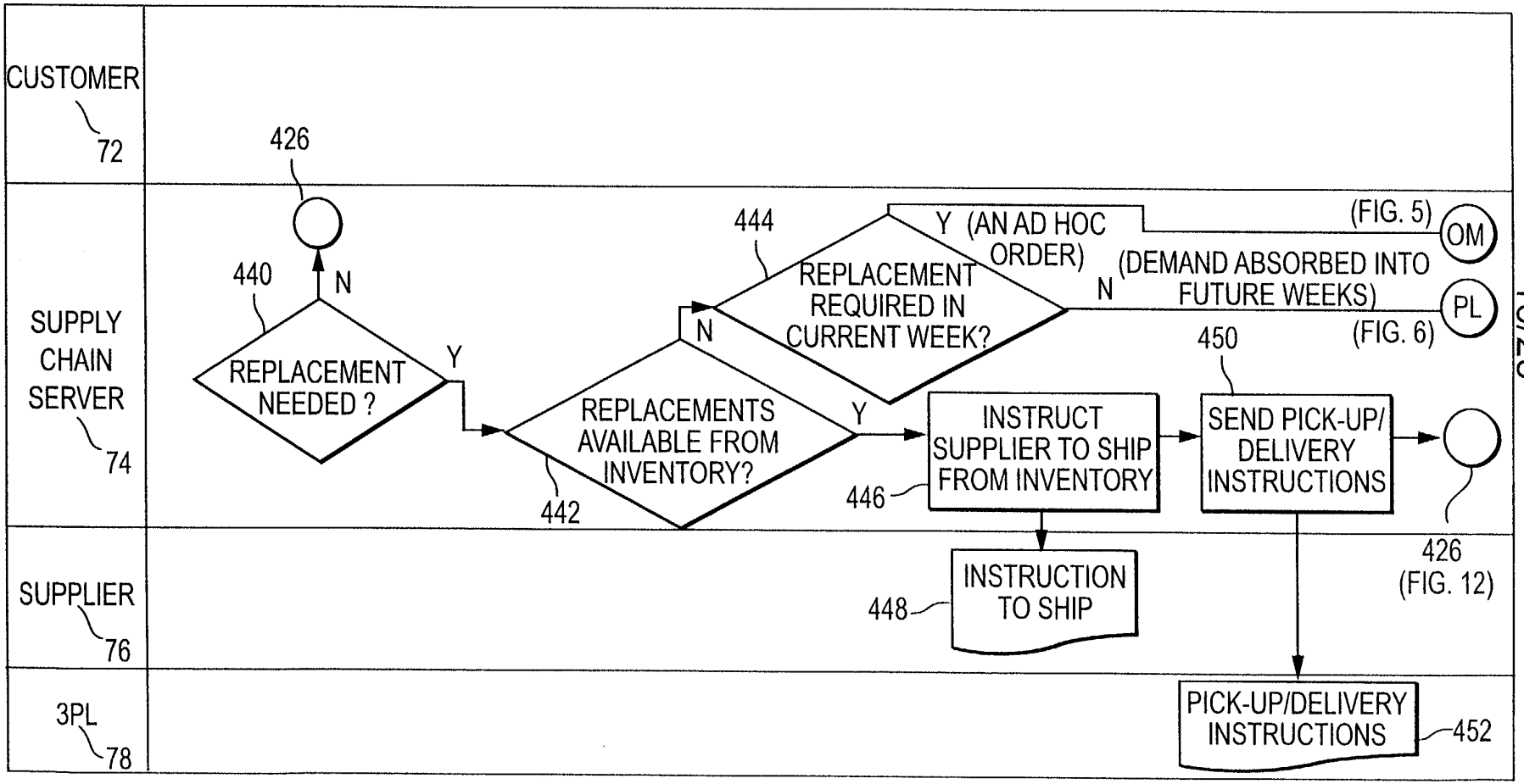

CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
426
440
N
REPLACEMENT NEEDED ?
Y
442
N
444
REPLACEMENT REQUIRED IN CURRENT WEEK?
Y (AN AD HOC ORDER)
(FIG. 5)
OM
N (DEMAND ABSORBED INTO FUTURE WEEKS)
PL
(FIG. 6)
REPLACEMENTS AVAILABLE FROM INVENTORY?
Y
446
INSTRUCT SUPPLIER TO SHIP FROM INVENTORY
450
SEND PICK-UP/ DELIVERY INSTRUCTIONS
426
(FIG. 12)
448
INSTRUCTION TO SHIP
PICK-UP/DELIVERY INSTRUCTIONS
452

FIG. 15

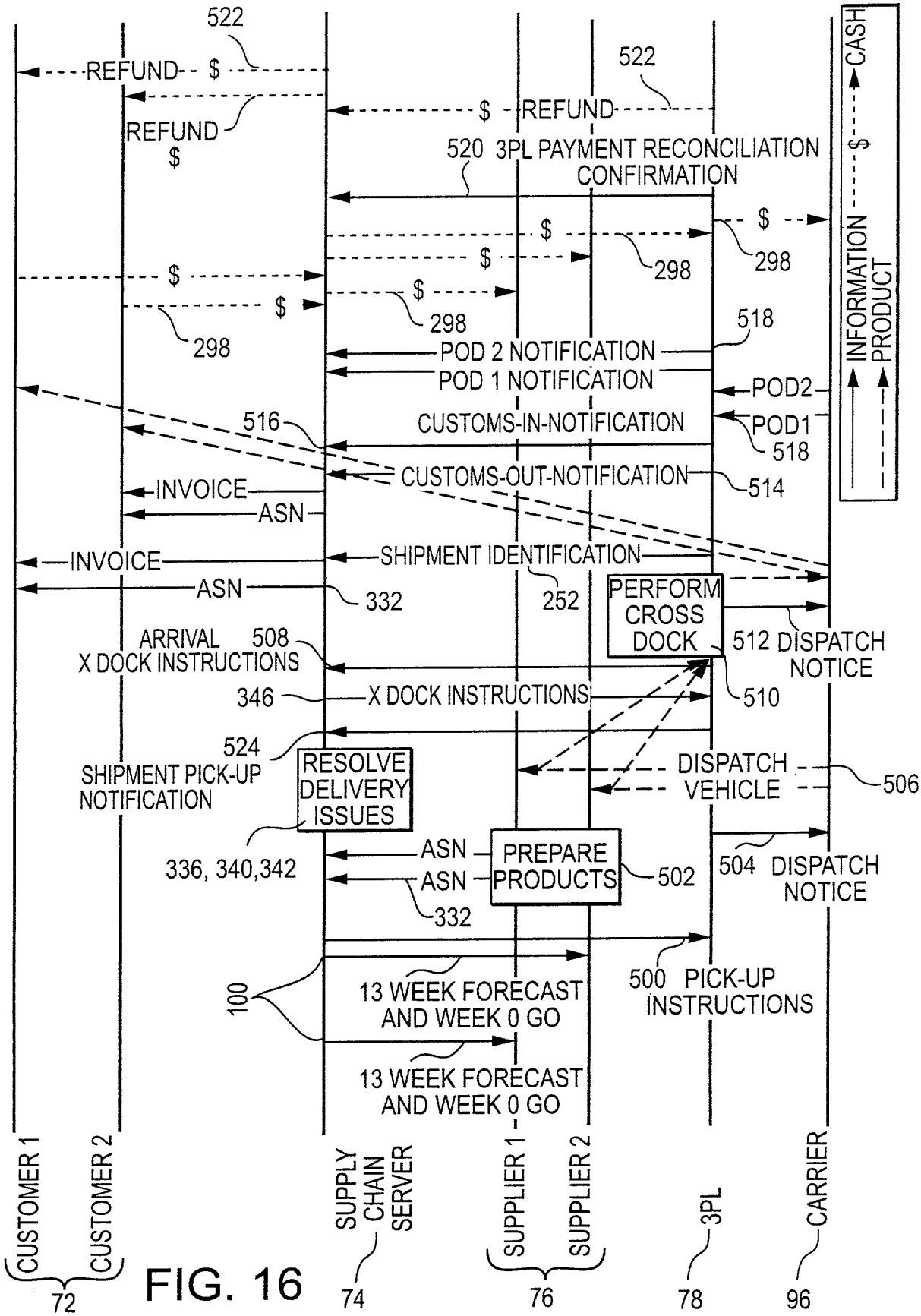

522
REFUND
$
522
REFUND
$
$
REFUND
520 3PL PAYMENT RECONCILIATION CONFIRMATION
$
$
298
298
$
$
298
$
$
298
298
518
POD 2 NOTIFICATION
POD 1 NOTIFICATION
POD2
POD1
518
516
CUSTOMS-IN-NOTIFICATION
CUSTOMS-OUT-NOTIFICATION
514
INVOICE
ASN
INVOICE
ASN
332
SHIPMENT IDENTIFICATION
252
PERFORM CROSS DOCK
512 DISPATCH NOTICE
ARRIVAL X DOCK INSTRUCTIONS
508
346
X DOCK INSTRUCTIONS
510
524
SHIPMENT PICK-UP NOTIFICATION
RESOLVE DELIVERY ISSUES
DISPATCH VEHICLE
506
336, 340,342
ASN
ASN
332
PREPARE PRODUCTS
502
504 DISPATCH NOTICE
100
13 WEEK FORECAST AND WEEK 0 GO
500 PICK-UP INSTRUCTIONS
13 WEEK FORECAST AND WEEK 0 GO
INFORMATION
PRODUCT
CASH
$
CUSTOMER 1
CUSTOMER 2
SUPPLY CHAIN SERVER
SUPPLIER 1
SUPPLIER 2
3PL
CARRIER
72
74
76
78
96

FIG. 16

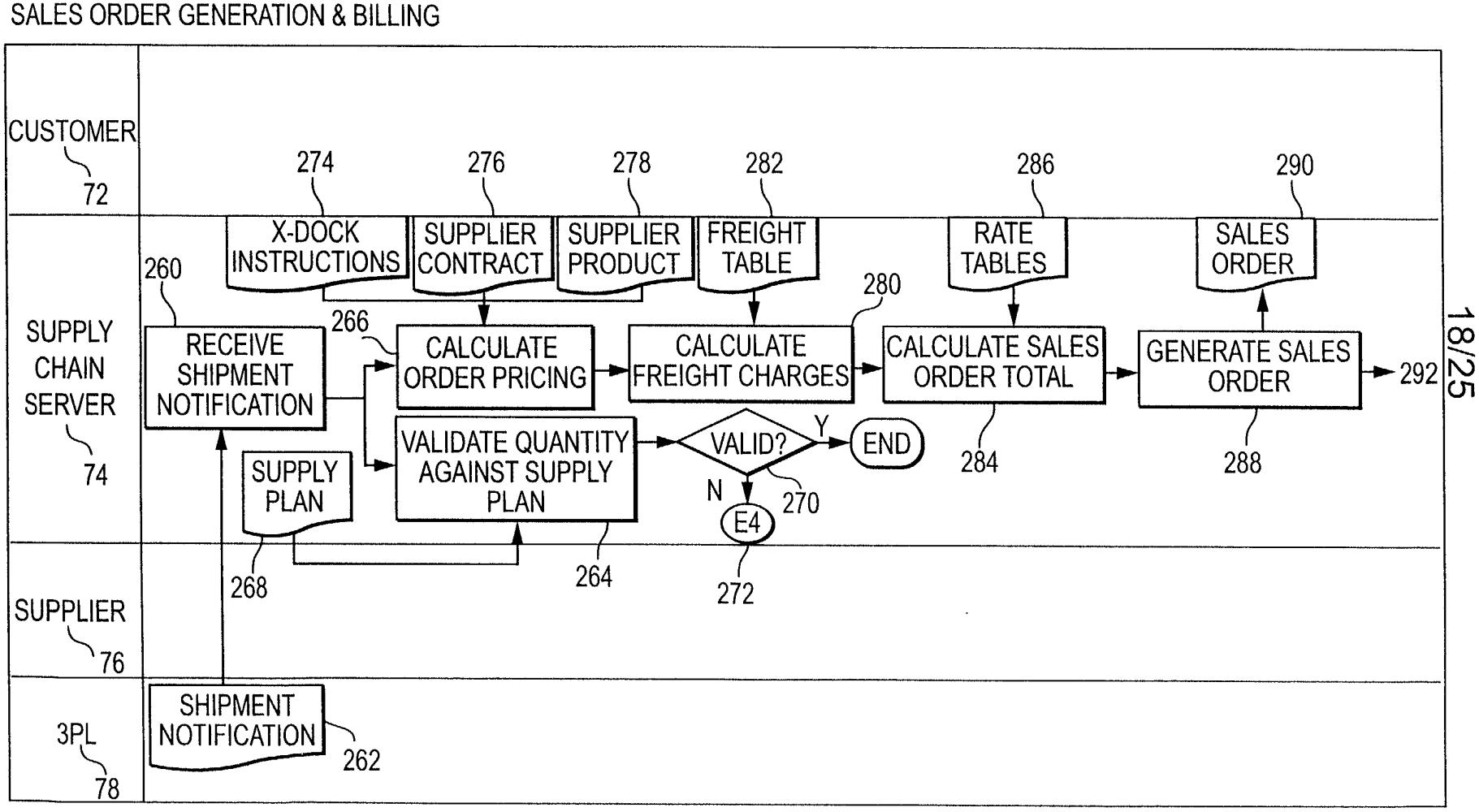

SALES ORDER GENERATION & BILLING
CUSTOMER
72
SUPPLY CHAIN SERVER
74
SUPPLIER
76
3PL
78
274
276
278
282
286
290
X-DOCK INSTRUCTIONS
SUPPLIER CONTRACT
SUPPLIER PRODUCT
FREIGHT TABLE
RATE TABLES
SALES ORDER
260
266
280
RECEIVE SHIPMENT NOTIFICATION
CALCULATE ORDER PRICING
CALCULATE FREIGHT CHARGES
CALCULATE SALES ORDER TOTAL
GENERATE SALES ORDER
292
VALIDATE QUANTITY AGAINST SUPPLY PLAN
VALID?
Y
END
N
E4
270
272
SUPPLY PLAN
268
264
284
288
SHIPMENT NOTIFICATION
262

FIG. 17

SALES ORDER GENERATION & BILLING (CONT.)

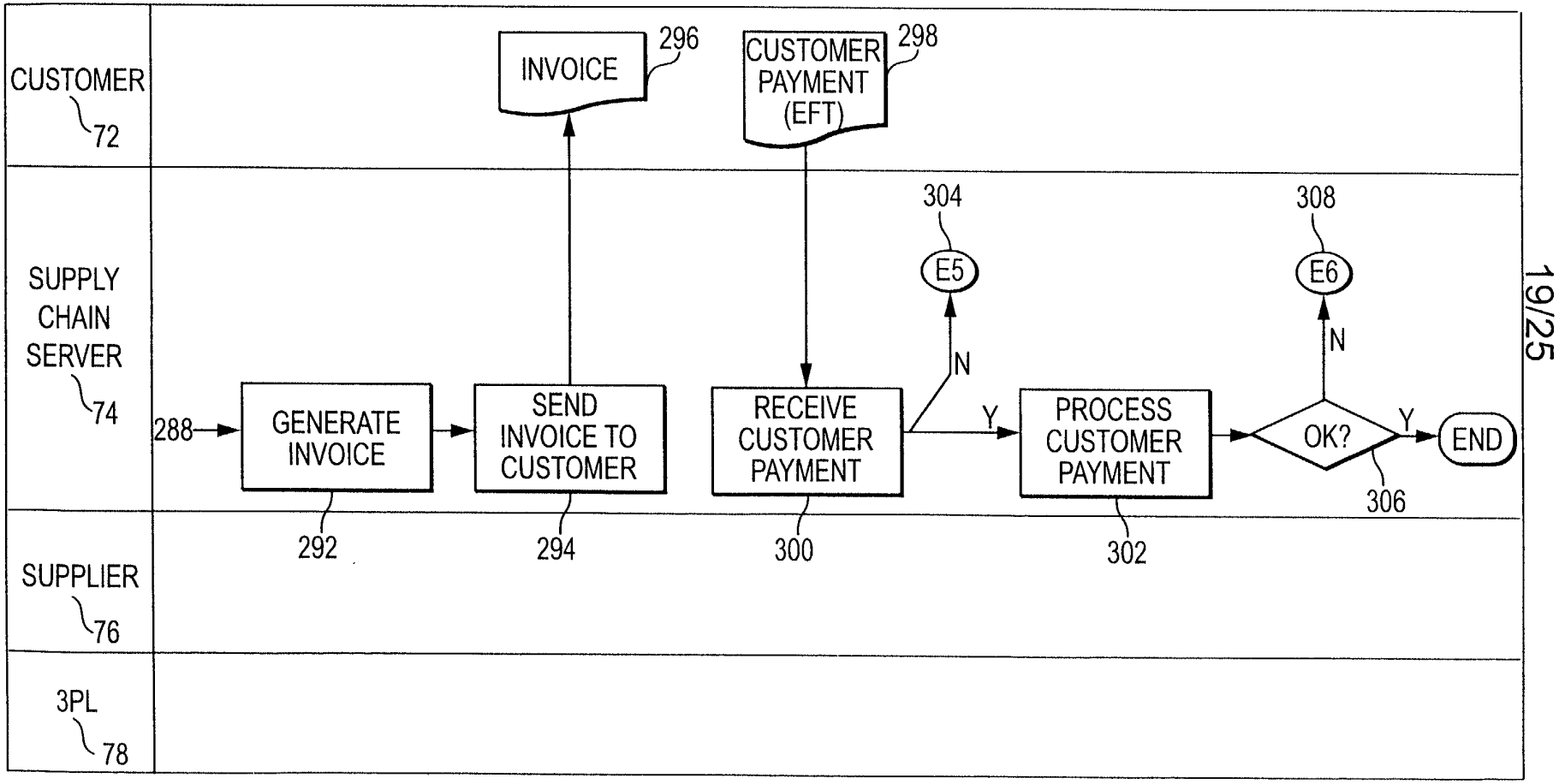





FIG. 18

| | – REAL-TIME – | – DAILY – | – WEEKLY – | – MONTHLY – |
|---|---|---|---|---|
| OPERATIONAL | •ORDER STATUS<br>•(EVENTUALLY) CUSTOMER INFO UPDATES<br>•ABORT CODE<br>•EMAIL TO ACCOUNT TEAM<br>•SHIPMENT TRACKING (LINK TO 3PL SITE)<br>•ALERTS/ MESSAGES | •CUSTOMER OPEN ORDERS<br>•CUSTOMER PARTS PURCHASED WEEK-TO-DATE<br>•S'S SPENT WEEK-TO-DATE<br>•ALLOCATION WATCH<br>•PART SPECIFIC QUANTITIES PURCHASED<br>•WEEK -TO- DATE<br>•COMMODITY-SPECIFIC QUANTITIES PURCHASED WEEK-TO-DATE<br>•TOP-OFF PARTS ATP* | •CUSTOMER PARTS PURCHASED MONTH-TO-DATE<br>•CUSTOMER $'S SPENT MONTH-TO-DATE<br>•CUSTOMER ORDER QUANTITIES<br>•WHAT'S NEW<br>•MARKET INFO<br>•CUSTOMER FORECAST LOG<br>•ACCOUNT BALANCES<br>•PART SPECIFIC QUANTITIES PURCHASED MONTH-TO-DATE<br>•COMMODITY-SPECIFIC QUANTITIES PURCHASED MONTH-TO-DATE | •CURRENT SERVICES (I.E. SERVICES CUSTOMER HAS SUBSCRIBED TO)<br>•CUSTOMER PARTS PURCHASED YEAR-TO-DATE<br>•HISTORICAL STATISTICS (ORDER LOG, FORECAST LOG, ISSUES RESOLVED PRIOR TO CURRENT MONTH<br>•CUSTOMER $'S SPENT WEEK-TO-DATE<br>•PARTS SUPPLIED BY SUPPLY CHAIN NETWORK<br>•BASIC DATA SERVICE REPORTS<br>•PARTS SPECIFIC QUANTITIES PURCHASED YEAR-TO-DATE<br>•COMMODITY-SPECIFIC QUANTITIES PURCHASED YEAR-TO-DATE<br>•FEED FORWARD REPORTS<br>•PREMIUM DATA SERVICE REPORTS*<br>•BULLSEYE REPORTS |
| ANALYSIS | | •CUSTOM REPORTS* | •CUSTOM REPORTS* | •SUPPLIER PERFORMANCE STATISTICS<br>•SUPPLY CHAIN NETWORK PERFORMANCE STATISTICS<br>•SUPPLY CHAIN NETWORK FORECAST ACCURACY/UPTAKE %<br>•3PL PERFORMANCE STATISTICS<br>•MARKET DATA TRENDS*<br>•CUSTOM REPORTS ANALYSIS* |

FIG. 19

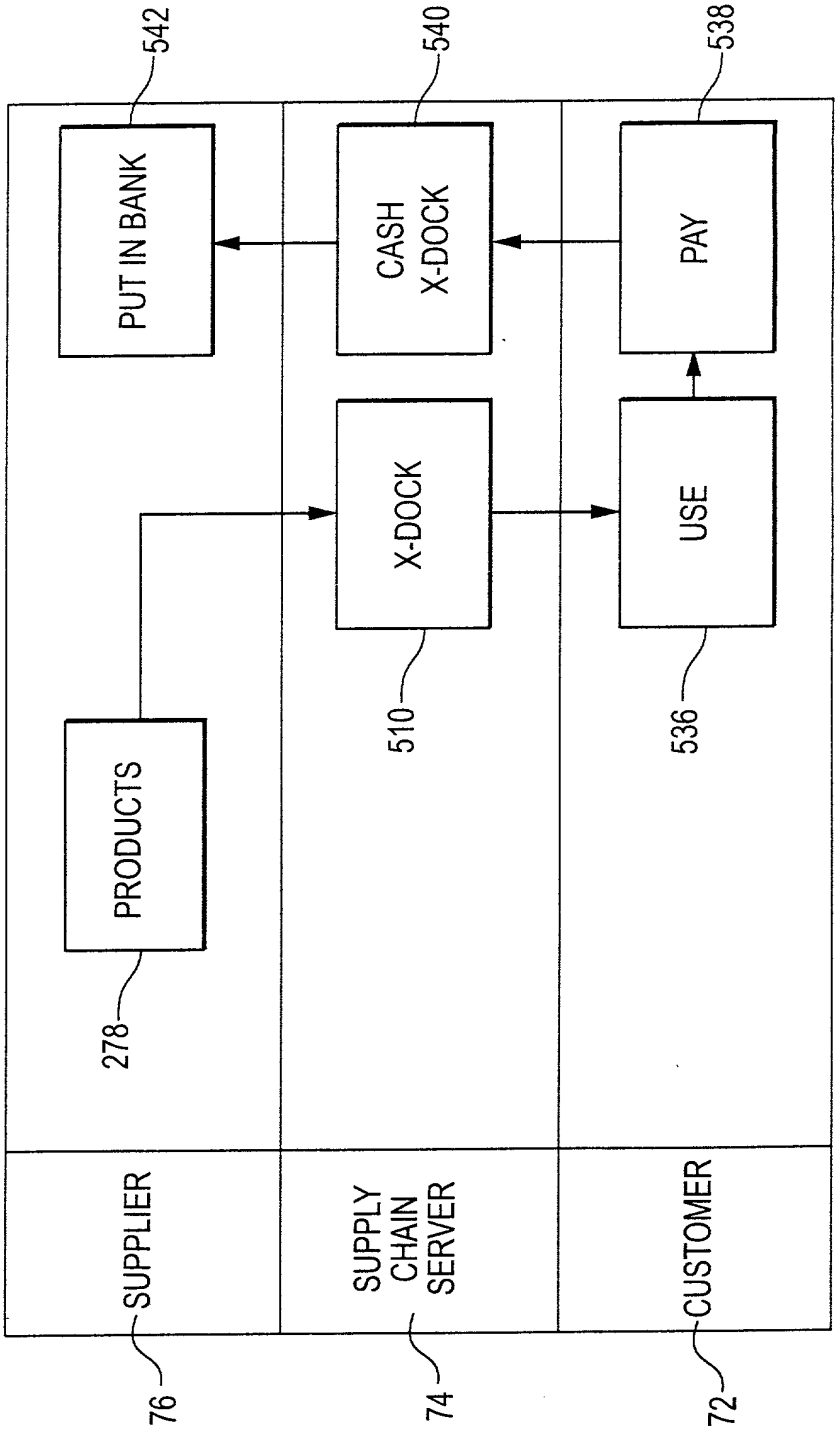

SUPPLIER
SUPPLY CHAIN SERVER
CUSTOMER
76
74
72
PRODUCTS
278
X-DOCK
510
USE
536
PAY
538
CASH X-DOCK
540
PUT IN BANK
542

FIG. 20

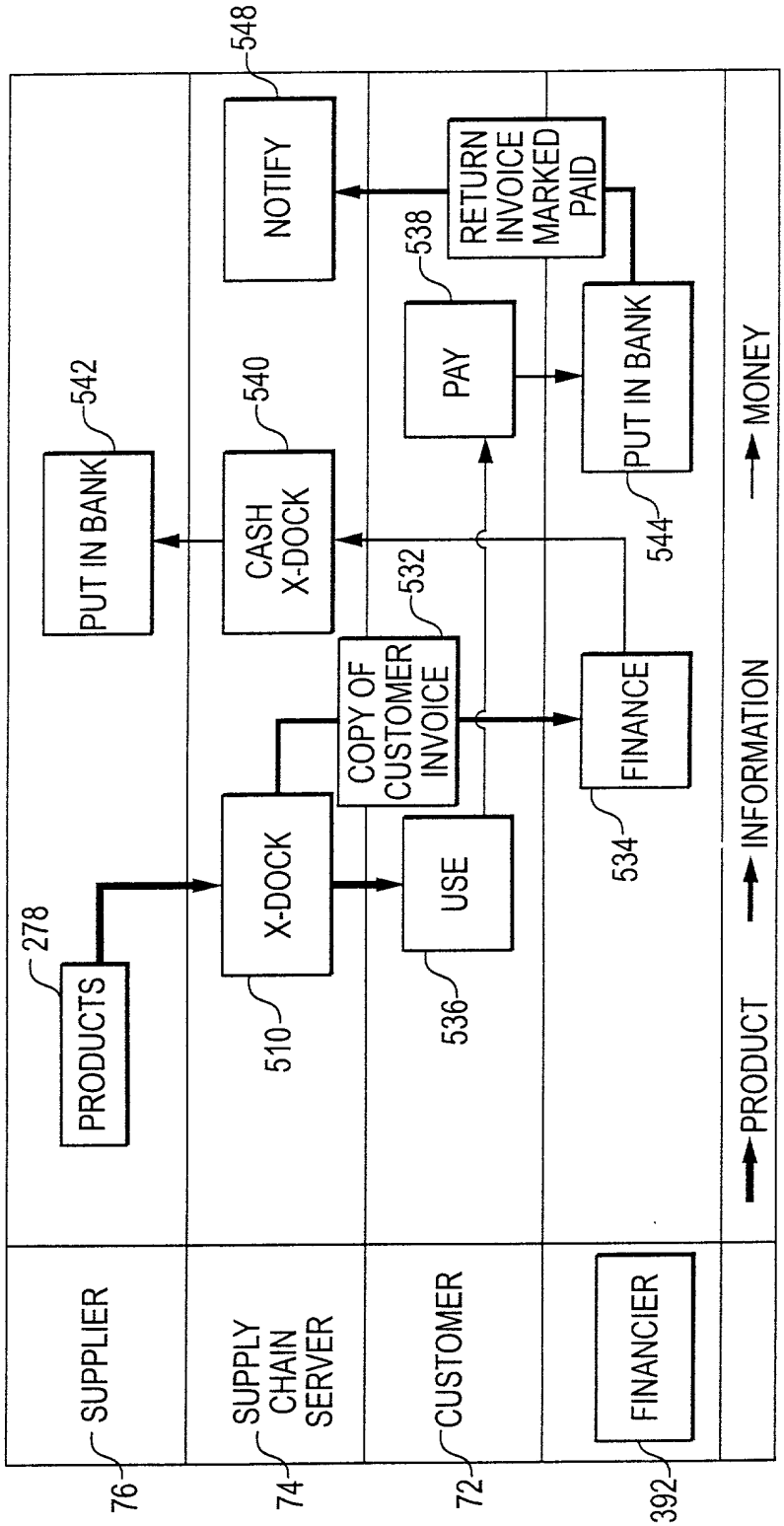

SUPPLIER
SUPPLY CHAIN SERVER
CUSTOMER
FINANCIER
76
74
72
392
PRODUCTS
278
X-DOCK
510
USE
536
COPY OF CUSTOMER INVOICE
532
FINANCE
534
PUT IN BANK
542
CASH X-DOCK
540
PAY
538
PUT IN BANK
544
NOTIFY
548
RETURN INVOICE MARKED PAID
PRODUCT
INFORMATION
MONEY

FIG. 21

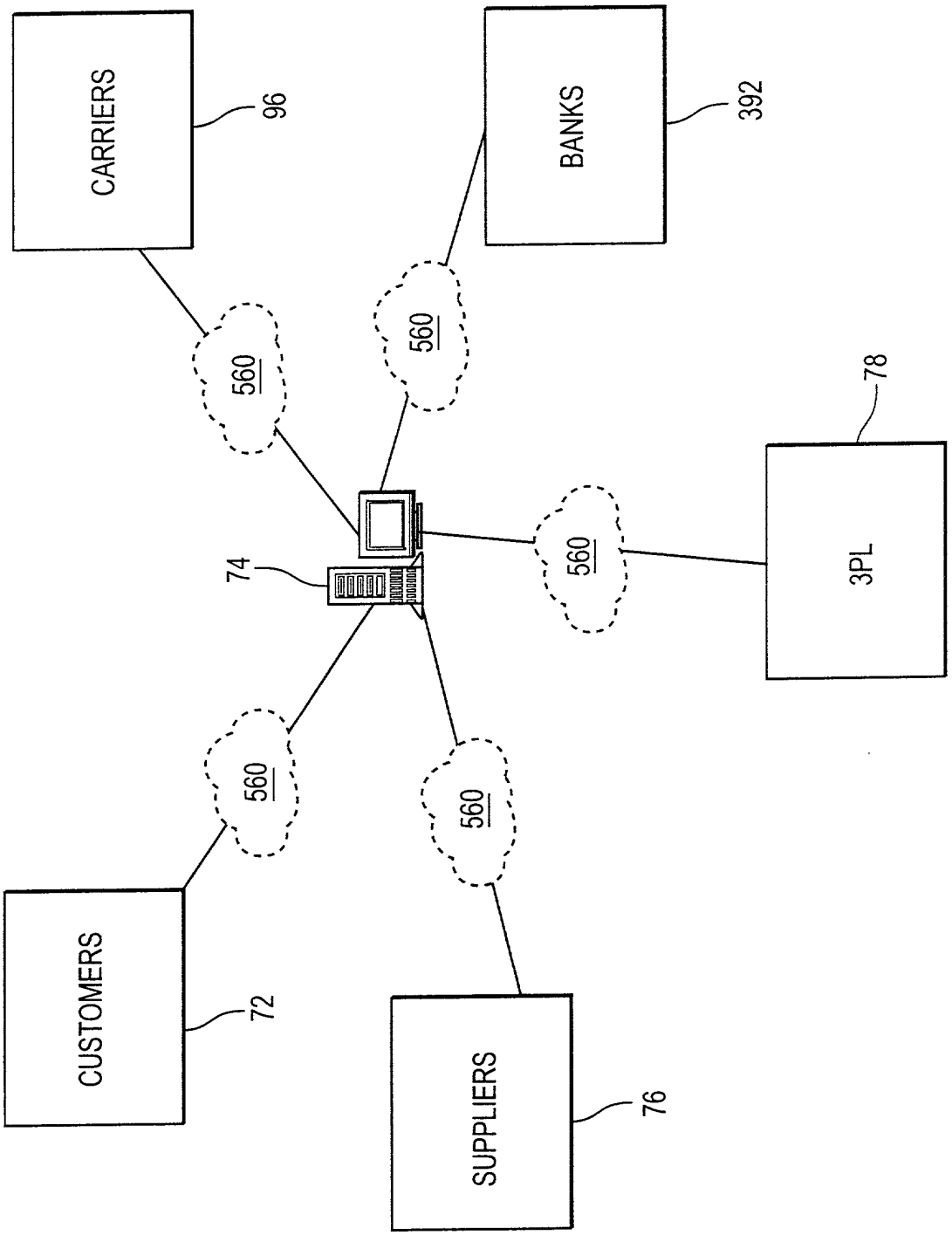

CARRIERS
96
BANKS
392
560
560
78
74
560
3PL
560
560
CUSTOMERS
72
SUPPLIERS
76

FIG. 22

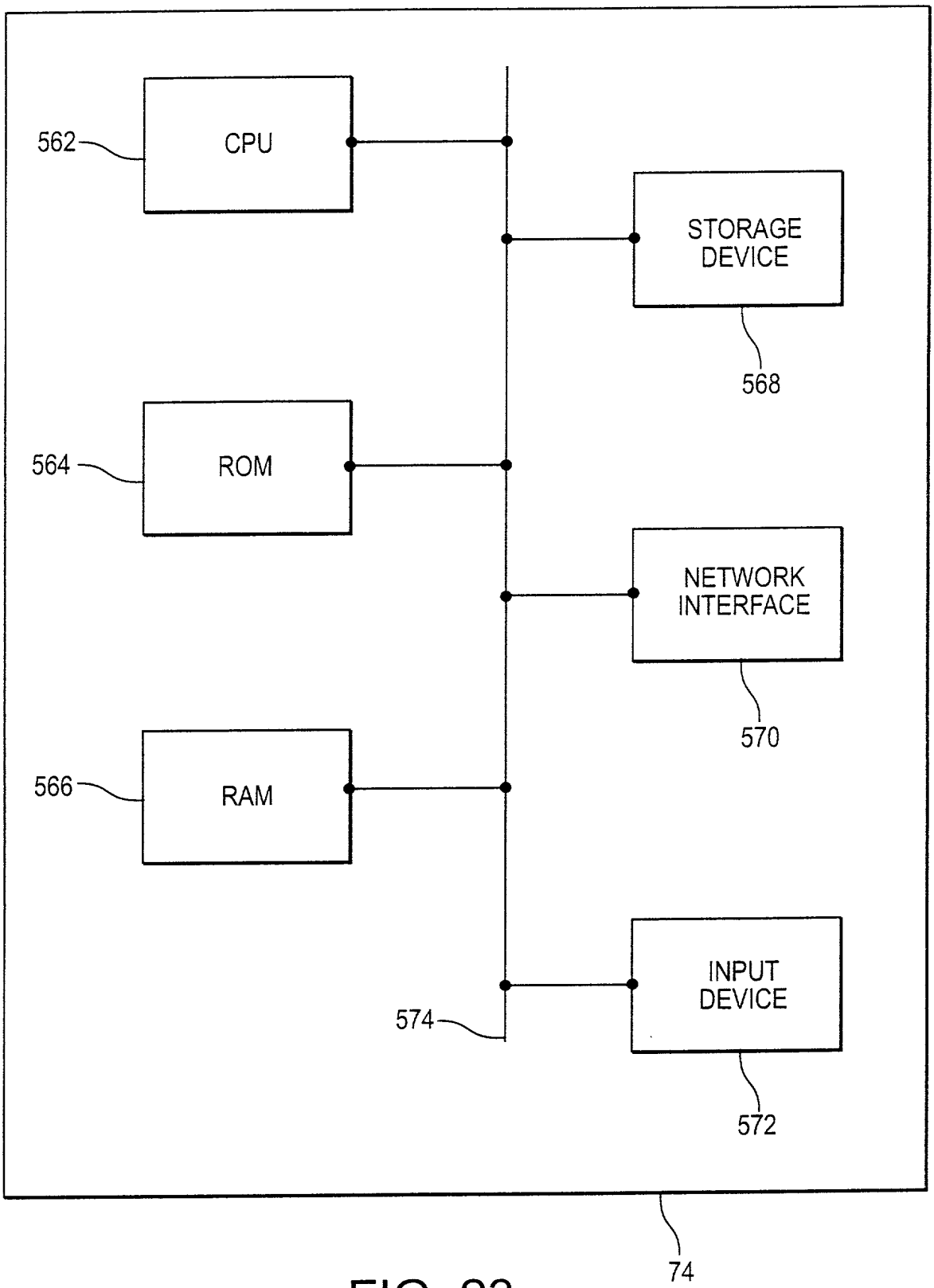



FIG. 23

0975650 - 100101

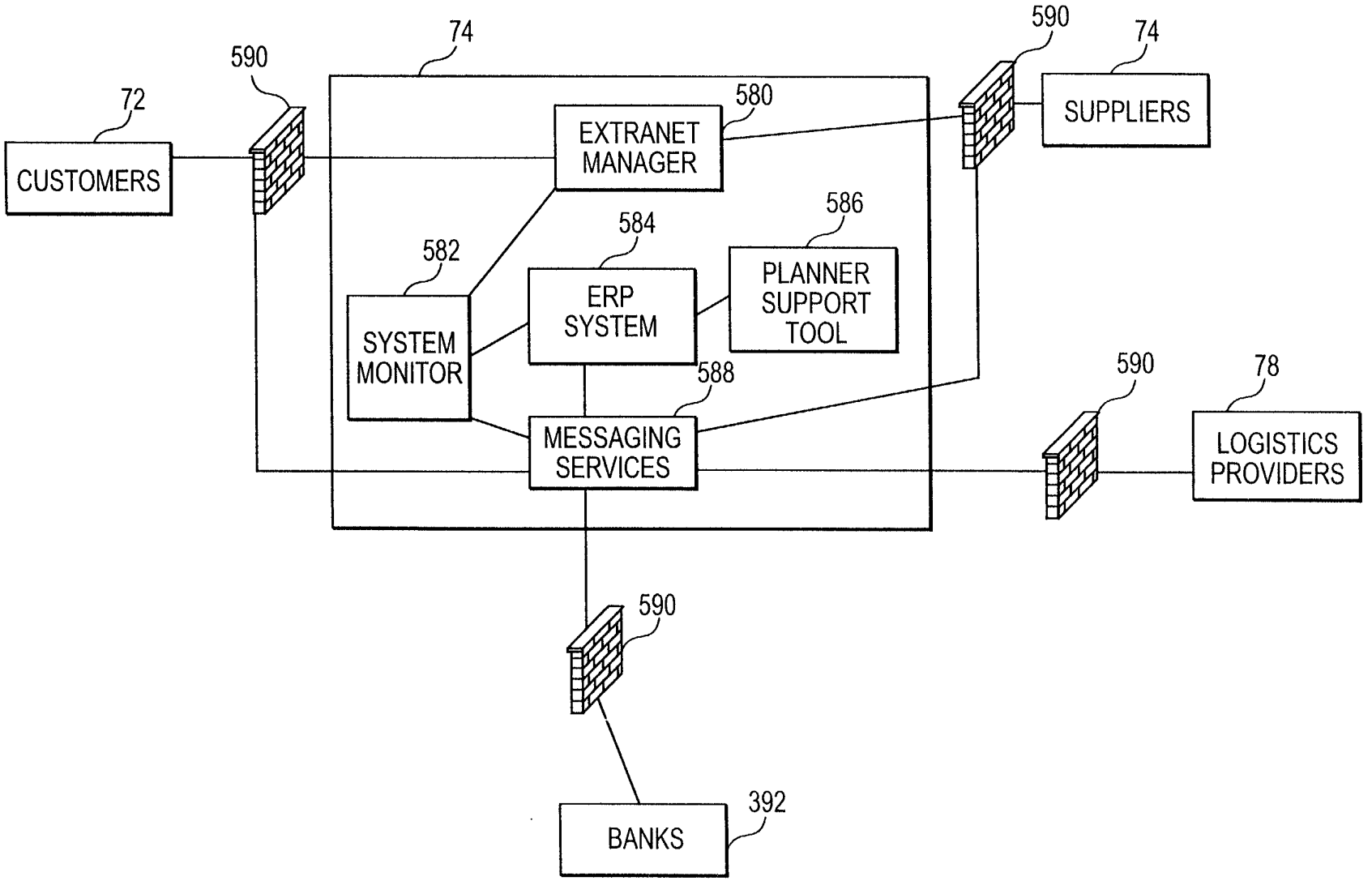

74
590
72
CUSTOMERS
580
EXTRANET MANAGER
590
74
SUPPLIERS
586
584
582
ERP SYSTEM
PLANNER SUPPORT TOOL
SYSTEM MONITOR
588
590
78
MESSAGING SERVICES
LOGISTICS PROVIDERS
590
392
BANKS

FIG. 24